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GenCore version 5.1.6
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OM protein - protein search, using sw model

June 17, 2005, 16:05:55 ; Search time 66.8904 Seconds (without alignments) 109.858 Million cell updates/sec Run on:

US-09-719-379A-1 105 1 RSDYKFYEAANGTRDHKKG 19 Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

2105692 seqs, 386760381 residues Searched:

2105692 Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 200000000 88 Minimum 1 Maximum 1

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

A_Geneseq_16Deco4:*
1: geneseqp1980s:*
2: geneseqp2000s:*
3: geneseqp2001s:* geneseqp2003as: * geneseqp2002s:* geneseqp2004s:* Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		Description	Aay79959 Non-typea	Aay79987 Non-typea		Aay79961 Non-typea		_	Aay79955 Non-typea		Aab20881 LB1gr1 pe	Aab47443 Entire 3r	Aaw67581 Synthetic	_	Ada25172 Chimeric	Adc89661 H. influe	Aar66294 Non-typab		Aay79957 Non-typea	Aay79963 Non-typea	•	Aay79956 Non-typea	_		Aay79967 Non-typea	Aay79968 Non-typea	Aay79973 Non-typea
		qı	AAY79959	AAY79987	AAY79960	AAY79961	AAY79982	AAY79991	AAY79955	AAB47439	AAB20881	AAB47443	AAW67581	AAY79986	ADA25172	ADC89661	AAR66294	AAY79993	AAY79957	AAY79963	AAY79958	AAY79956	AAW67572	ADA25163	AAY79967	AAY79968	AAY79973
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de	Query	Match	100.0	100.0	96.2	95.2	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	91.4	90.5	89.5	89.5	88.6	98.6	86.7	86.7	85.7
		Score	105	105	101	100	66	66	66	66	66	66	66	66	66	66	66	66	96	95	94	94	93	93	91	91	90
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Aay79970 Non-typea	Aay79966 Non-typea		Aay79965 Non-typea		Aay79992 Non-typea	Aay79964 Non-typea	Aay79969 Non-typea	Aar85450 Nontypabl	Adc89652 H. influe	Aay79972 Non-typea	Aag45896 Arabidops	Aag34578 Arabidops	Aag20945 Arabidops	Aag45883 Arabidops	Aag24458 Arabidops	Aag20944 Arabidops	Aag24457 Arabidops	Aag45882 Arabidops	Aag45881 Arabidops
AAY79970	AAY79966	AAY79962	AAY79965	AAY79971	AAY79992	AAY79964	AAY79969	AAR85450	ADC89652	AAY79972	AAG45896	AAG34578	AAG20945	AAG45883	AAG24458	AAG20944	AAG24457	AAG45882	AAG45881
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13	19	19	19	19	19	19	19	338	18	19	311	343	361	361	361	378	378	378	414
84.8	84.8	83.8	83.8	81.9	81.0	81.0	80.0	80.0	79.0	76.2	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7
89	89	88	88	98	82	82	84	84	83	8	48	48	48	48	48	48	48	48	48
56	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Hemophilus influenzae; PS-like fimbrin protein; lipoprotein D; LBI [i); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection. Non-typeable H. influenzae group 1 LB1(f) peptide N10567RM. Ŕ AAY79959 standard; peptide; 19 15-MAY-2000 (first entry) AAY79959; RESULT 1

Haemophilus influenzae.

W09964067-A2

16-DEC-1999.

99WO-US011980. 28-MAY-1999;

98GB-00012613 11-JUN-1998;

(SMIK) SMITHKLINE BEECHAM BIOLOGICALS. (OHIS) UNIV OHIO STATE RES FOUND.

Lobet Y;

Dequesne G,

Cohen J,

Bakaletz LO,

WPI; 2000-116457/10.

Novel antigenic P5-like fimbrin subunit peptides used in vaccines against Haemophilus influenza.

Example 1; Page 29; 68pp; English.

The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various Haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAX79955 to AAX79993, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of the present invention

Matches

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RESULT 2 AAY79987

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Novel antigenic P5-like fimbrin subunit peptides used in vaccines against Haemophilus influenza.
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                                                                                                                     Vaccine, non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein, Haemophilus influenzae; P5-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
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                                                                                      Non-typeable H. influenzae group 1 LB1(f) peptide N86027NP.
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Pred. No. 1.9e-10;
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                                                    (first entry)
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                                                15-MAY-2000
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               AAY79960;
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Haemophilus influenza.
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                                                                                                                                                                                                                                                                                                                                                                                         Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Haemophilus influenzae; PS-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; onjunctivitis; lower respiratory tract infection.
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                                 100.0%; Score 105; DB 3;
100.0%; Pred. No. 3.8e-11;
ive 0; Mismatches 0;
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Pred. No. 3.8e-11;
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(OHIS ) UNIV OHIO STATE RES FOUND.
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Best Local Similarity 100.
Matches 19; Conservative
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18 19; Conservative
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Sequence 19
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Gaps

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AAY79960 standard; peptide; 19 AA

AAY79960 ID AAY7

RESULT 3

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antigenic P5-like fimbrin subunit peptides used in vaccines against
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                                                                                                                                                              peptides (LB1(f) peptides) of P5-like fimbrin proteins from various haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. Influenzae, Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. ANY19955 to AAY19933, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various Haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY19955 to AAY19993, and
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                                                                                                                                          antigenic P5-like fimbrin subunit
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                                                                                          Example 1; Page 30; 68pp; English
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                                                                                                                                            The present invention describes
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Otitie media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AVX79955 to AXY7995, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various Haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Haemophilus influenzae; PS-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
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                                                                                                                                                                                                                UNIV OHIO STATE RES FOUND
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                                                                                            99WO-US011980
                                                                                                                                            98GB-00012613
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Best Local Similarity 94.7%;
Matches. 18; Conservative
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                                                                                                                                                                                                                                                                                                                WPI; 2000-116457/10.
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WO9964067-A2
                                                                                            28-MAY-1999;
                                                                                                                                          11-JUN-1998;
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S X C C C C C C C C C X S X X I X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X B X 
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The sequences given in AAB47439-46 represent peptides which may be used to replace one or more surface exposed loops of major outer membrane protein PS (MOMP PS) of non-typeable H. influenzae (ntHi). Each of these peptides contain an LBI(f) peptide which is a 19 amino acid peptide derived from the sequence of MOMP PS from strain ntHill28, representing amino acid Argili to Gly135. This speptide represents the third exposed loop of PS and is a potential B cell epitope. The loops of the invention are modified in terms of being in a non-native environment in the recombinant outer membrane protein. The modified MOMP PS may be used to induce an immune response in a mammal to prevent or treat Haemophilus sinfluenzae infection or associated disease, e.g., otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Recombinant bacterial outer membrane protein where one or more surface-
exposed loops are modified is useful as a vaccine to prevent or treat
Haemophilus influenzae infection or associated disease, e.g., otitis
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                                                                                                                                                                                                                             surface exposed loop; major outer membrane protein P5; MOMP P5;
non-typeable H. influenzae; ntHi, LB1(f) peptide; B cell epitope;
otitis media; sinusitis; conjunctivitis;
lower respiratory tract infection.
                                                                                                                                                                                      LB1(f) containing peptide from strain ntHi-1128 (Group 1 type).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                AAB47439 standard; peptide; 19 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 26; 29pp; English.
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94.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptides (LBI(f) peptides) of P5-like fimbrin proteins from various Haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. fiftluenzae, Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY79955 to AAY79933, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of
AAZ91201 to AAZ91252, represent sequences used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Heemophilus influenzae; PS-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
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Pred. No. 4.3e-10;
0; Mismatches 1; Indels
                                                                                                                            Score 99; DB 3; Length 19;
Pred. No. 4.3e-10;
                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Non-typeable H. influenzae group 1 LB1(f) peptide N1128.
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                                                                                                                                                                     0; Mismatches
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                                                                                                                        94.3%;
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Best Local Similarity 94.7
Matches 18; Conservative
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                                                                                                                            Query Match
Best Local Similarity
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Length 19; 1; Indels

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The sequences given in AAB47439-46 represent peptides which may be used to replace one or more surface exposed loops of major outer membrane protein PS (MOMP PS) of non-typeable H. influenzae (ntHi). Each of these peptides contain an LB1() peptide which is a 19 amino acid peptide derived from the sequence of MOMP PS from strain ntHill28, representing amino acids Argll7 to Gly135. This peptide represents the third exposed loop of PS and is a potential B cell epitope. The loops of the invention are modified in terms of being in a non-native environment in the recombinant outer membrane protein. The modified MOMP PS may be used to induce an immune response in a mammal to prevent or treat Haemophilus influenzae infection or associated disease, e.g., otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection
                                                                                                                                                                                                                                                                                                                                    Recombinant bacterial outer membrane protein where one or more surface-exposed loops are modified is useful as a vaccine to prevent or treat Haemophilus influenzae infection or associated disease, e.g., otitis
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non-typeable H. influenzae; ntHi; LB1(f) peptide; B cell epitope; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94.3%; Score 99; DB 4; I
94.7%; Pred. No. 6.8e-10;
iive 0; Mismatches 1;
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                                                                                                                                                                                                                                      (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                                                                                                                                                       Poolman J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW67581 standard; peptide; 40 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 2; Page 26; 29pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 RSDYKFYEAANGTRDHKKG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21
                                                                                                                                                                    13-FEB-2001; 2001WO-EP001556
                                                                                                                                                                                                     15-FEB-2000; 2000GB-00003502.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RSDYKFYEDANGTRDHKKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95US-00460502.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                        media and conjunctivitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                       Berthet FJ, Denoel P,
                                                                     Haemophilus influenzae
                                                                                                                                                                                                                                                                                                     WPI; 2001-522599/57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
nes 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 28 AA;
                                                                                                  WO200161013-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-JUN-1995;
                                                                                                                                     23-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immunogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US5843464-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-DEC-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW67581;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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Matches
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     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #X#XBX#XXXX#XBX#X#
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes an immunogen (I) comprising a peptide or last and a carrier (Ib) derived from protein D of Haemophilus influenzae or its fragment. Also described are: (1) a vaccine comprising (I), and an excipient; (2) preparation of (I), comprising conjugating a peptide to protein D or its fragment; and (3) preparation of a vaccine of (1), and an excipient (I) has cytostatic, antiallergic, nootropic, neuroprotective and protozoacide activities and the vaccine are useful for the manufacture of a medicament for preventing and treating infectious disease such as malaria or chronic disease such as cancer, Alzheimer's disease or allergy in a patient. Unlike prior art immunogens, (I) induces high levels of antipeptide immune responses while inducing a mederate humoral responses against the carrier. The present sequence represents an IBBgrl peptide which was coupled through an additional C-terminal cysteine via maleimide to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunogens and vaccine comprising the immunogen useful for preventing and treating infectious diseases e.g. malaria and chronic disease e.g. cancer, comprises peptide and carrier from protein D of influenzae.
prostate cancer; Haemophilus influenzae; vaccine; infectious disease; malaria; cytostatic; antiallergic; nootropic; neuroprotective; protozoacide; Alzheimer's disease; allergy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        surface exposed loop; major outer membrane protein P5; MOMP P5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 4.6e-10;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Entire 3rd loop from strain ntHi-1128 (Group 1 type)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein D in an example from the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                         Van-Mechelen MP, Verriest C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                      (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                  'note= "acetylated"
                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 14; Page 34; 53pp; English
                                                                                                                                                                    /note= "amidated"
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                                                                                                                                                                                                                                                                                                   99GB-00004405.
99GB-00004408.
99GB-00004412.
99GB-00019260.
                                                                                                                                                                                                                                                                    22-FEB-2000; 2000WO-EP001457
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Best Local Similarity 94.7%;
Matches 18; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                       Lobet Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 20 AA;
                                                                                                                                                                                                  WO200050077-A1
                                                                                                    Key
Modified-site
                                                                                                                                                 Modified-site
                                                                                                                                                                                                                                                                                                                      25-FEB-1999;
25-FEB-1999;
                                                                                                                                                                                                                                                                                                       25-PEB-1999;
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                                                                                                                                                                                                                                     31-AUG-2000
                                                                   Synthetic
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                                                                                                                                                                                                                                                                                                                                                                                                                         Coste M,
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Gaps

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Length 28; 1; Indels 9

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ADA25172 standard; peptide; 40 AA
                                                                                                                                                                                                                                              1 RSDYKFYEAANGTRDHKKG 19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 10; Col 4; 16pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chimeric fimbrin peptide LB1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kaumaya PTP;
                                                                                                                                                                                                                                                                                                                                                                                                                                20-NOV-2003 (first entry)
                                                                                                                                                                                                                  18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (OHIS ) UNIV OHIO STATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Haemophilus influenzae.
Measles virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                influenzae infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-615247/58.
                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
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                                                                                                                                                Sequence 40 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               otitis media.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-SEP-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                 ADA25172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chimeric.
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Matches
                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                RESULT 13
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                                                                                                                                                                                                                  fused via
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
                                                                                                                                                                                                               comprising a non-typable Haemophilus influenzae fimbrin peptide fused via a linker peptide to a T-cell epicope peptide. The chimeric peptide is used in immunogenic compositions which induce an immune response against non-typable Haemophilus influenzae. This sequence represents an example of a chimeric fimbrin/T-cell epicope peptide and is designated LB1. The apptide comprises a 19 amino acid sequence corresponding to amino acids 117-135 of the fimbrin protein, the linker sequence and amino acid 288-302 of the measles virus fusion protein (a T-cell epicope)
                                                                                                             Synthetic chimeric fimbrin peptide - useful for vaccination against non-typable Haemophilus influenzae.
                                                                                                                                                                                                 to the manufacture of a synthetic chimeric peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Haemophilus influenzae; PS-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; onjunctivitis; lower respiratory tract infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                94.3%; Score 99; DB 2; Length 40; 94.7%; Pred, No. 1e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Measles virus fusion protein T-cell promiscuous epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS. (OHIS ) UNIV OHIO STATE RES FOUND.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 RSDYKFYEDANGTRDHKKG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 RSDYKFYEAANGTRDHKKG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY79986 standard; peptide; 40
                                                                                                                                                                 Claim 4; Col 4; 16pp; English.
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                                                 Bakaletz LO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 94.7
Matches 18; Conservative
               (OHIS ) UNIV OHIO STATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cohen J,
                                                                                                                                                                                                 The invention relates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Haemophilus influenza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-116457/10
                                                                                  WPI; 1999-044514/04
                                                                                                                                                                                                                                                                                                                                                                    Sequence 40 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Measles virus
                                                 Kaumaya PTP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W09964067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-MAY-1999;
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prevention, and treatment of Haemophilus influenzae infections, such as orticis media, sinusitis, conjunctivitis influenzae infections, such as infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY79955 to AAY7993, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide is useful for treating a non-typable Haemophilus influenzae (NTH1) infection and otitis media. The synthetic peptides do not require tedious purification techniques. The present sequence represents the amino acid sequence of the chimeric fimbrin peptide LB1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic chimeric fimbrin peptide, useful for treating Haemophilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a synthetic chimeric fimbrin peptide. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
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                                                                                                                                                                                                                                                                                                                                                                                         Length 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                     94.3%; Score 99; DB 3; 94.7%; Pred. No. 1e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
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Chimeric.

ADC89661;

RESULT 14

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The fimbrin proteins from 15 randomly selected type b and non- typable clinical isolates of Haemophilus influenzae share common epitopes. Thus frimbrin isolated from non-typable Haemophilus influenzae 1128 strain is a particularly suitable immunogen to protect against the different non-typable HJ. influenzae that cause otitis media. Fimbrin protein is produced by culturing a transformed microbial host, pref. E.coli, Sporodoptera frugiperda or a mucosal pathogen. Fimbrin protein (FP) produced by this process is claimed. The FP protein migrates in produced by this process is claimed. The FP protein migrates in produced on 25-MAR-2003 to correct PN field.) (Updated on 25-MAR-2003 to correct PN field.) (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vaccine comprising non-typable Haemophilus influenza fimbrin protein - useful in studying, preventing or reducing the severity of otitis media, also fimbrin protein and DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Haemophilus influenzae; P5-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 99; DB 2; Length 359;
Pred. No. 1.4e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                 234. .249
/label= internal CNBr fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                            Kolattukudy PE, Bakaletz LO, Sirakova T;
  Fimbrin protein; vaccine; otitis media
                                                                                                  22. .33
/label= amino terminus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plasmid LPD-LB1-III protein sequence.
                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY79993 standard; protein; 464 AA
                                                                                                                                                                                                                                                                                                                                                      (OHIS ) UNIV OHIO STATE RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Fig 5; 45pp; English.
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                                                                                                                                                                                                                                                                            94WO-US005477.
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nes 18; Conservative
                                    Haemophilus influenzae.
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                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1995-006359/01.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 359 AA;
                                                                                                                                                                                                                                                                            12-MAY-1994;
                                                                                                                                                                                                                                                                                                               18-MAY-1993;
                                                                                                                                                                                              WO9426304-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY79993;
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                                                                                                                                     Peptide
                                                                             Key
Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a synthetic chimaeric fimbrin peptide LB1 or LB2 comprises a first peptide unit derived from H. influenzae fimbrin, a second peptide unit containing a T cell epitope and a third linker peptide which connects the first peptide to the second. The chimaeric peptide is useful for inducing an immune response in animals against non-typable Haemophilus influenzae (NTHi) and for preventing or reducing adherence of NTHi to host cells thereby preventing or reducing the severity of otitis media. The present sequence is an H. influenzae fimbrin peptide/measles virus T cell epitope chimaeric peptide of the invention, LB1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel synthetic chimeric fimbrin peptide LB1 or LB2 comprising a first peptide unit, T cell epitope as second peptide unit and third linker peptide unit, useful for preventing or reducing severity of otitis media.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                       H. influenzae fimbrin peptide/T cell epitope chimaera LB1
                                                                                                                                                                                                            Fimbrin; T cell epitope; vaccine; otitis media; auditory; antiinflammatory; LB1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Non-typable Haemophilus influenza (NTHi) fimbrin protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
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                                                       ADC89661 standard; peptide; 40 AA
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(revised)
(first entry)
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                                                                                                                                   (first entry)
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Best Local Similarity 94.7
Matches 18; Conservative
                                                                                                                                                                                                                                                                                          Haemophilus influenzae.
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                                                                                                                                                                                                                                                                                                                 Measles virus.
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25-MAR-2003
09-AUG-1995
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AAR66294;

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Sequence 19 AA;
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                                                                                                                                                                                     Query Match
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X44X8X00000000000X8
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                                                                                                                                              Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
Haemophilus influenza.
                                                                                                                                                                                           The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various Haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY79955 to AAX79933, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Haemophilus influenzae; PS-like fimbrin protein; lipoprotein D; LBI(f); immunogenic; antiqenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Non-typeable H. influenzae group 1 LB1(f) peptide N1234MEE.
                                                                                                                                                                                                                                                                                                                         Score 99; DB 3; Length 464;
Pred. No. 1.9e-08;
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                                                                                               Lobet Y;
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                                                                 (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS. OHIS ) UNIV OHIO STATE RES FOUND.
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                                                                                               Dequesne G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dequesne G,
                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY79957 standard; peptide; 19 AA
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                                                                                                                                                                         Claim 14; Fig 5; 68pp; English.
                                                                                                                                                                                                                                                                                                                         94.38;
                                                98GB-00012613.
                            99WO-US011980
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                                                                                                                                                                                                                                                                                                                                             18; Conservative
                                                                                              Bakaletz LO, Cohen J,
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                                                                                                                  WPI; 2000-116457/10.
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                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                           N-PSDB; AAZ91252.
                                                                                                                                                                                                                                                                                                        Sequence 464 AA;
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                            28-MAY-1999;
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                                                11-JUL-11998;
         16-DEC-1999
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Novel antigenic P5-like fimbrin subunit peptides used in vaccines against Haemophilus influenza.
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                                                                                                                                                                                     The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various Haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract influenzae. Antibodies may also be used in vaccines against H. influenzae and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY79955 to AAY7993, and AAS91201 to AAA291252, represent sequences used in the exemplification of the present invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Indels
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Pred. No. 1.5e-09;
1; Mismatches 1;
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                                                                                                                     Example 1; Page 29; 68pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY79963 standard; peptide; 19 AA
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89.5%;
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18 17; Conservative
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Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
Haemophilus influenza.
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                                                                                                                                                                                                 Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Haemophilus influenzae; P5-like fimbrin protein; lipoprotein D; LBI(f); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
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                                                                                                                                                                 Non-typeable H. influenzae group 1 LB1(f) peptide N152NP.
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Pred. No. 3.3e-09;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Non-typable H. influenzae fimbrin peptide #1.
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                                                    AAY79956 standard; peptide; 19 AA
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nes 17; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the present invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bakaletz LO,
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Best Local S
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            RESULT 20
AAY79956
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of the present invention
\lambda\lambda S91201 to \lambda\lambda S91252, represent sequences used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
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                                                                                                                                                   Gaps
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chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
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                                                                                                          Score 95; DB 3; Length 19;
Pred. No. 2.2e-09;
); Mismatches 1; Indels
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RSDYKFYEDENGTRDHKKG 19
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                                                                                                            90.5%;
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                                                                                                                                94.48;
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Matches 17; Conservative
                                                                                                                                                 17; Conservative
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Matches 17; Conserv
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Length 19; 1; Indels

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Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
Haemophilus influenza.
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peptide is useful for treating a non-typable Haemophilus influenzae (NTH1) infection and otitis media. The synthetic peptides do not require tedious purification techniques persent sequence represents the amino acid sequence of H. influenzae fimbrin subunit peptide #1.
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                                                                                                                                                                1; Indels
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Pred. No. 1.1e-08;
1; Mismatches 1;
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                                                                                                                              DB 6;
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Pred. No.
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                                                                                                                                88.6%;
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88.9%;
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                                                                                                                                                                    17; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the present invention
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                                                                                                                            Query Match
Best Local Similarity
Matches 17; Conserv
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                                                                                            Sequence 18 AA;
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                                                                                                                                                                                                                                                                                                                                                                                     fused via
                                                                                                                                                                                                                                                                                                                                                                   The invention relates to the manufacture of a synthetic chimeric peptide comprising a non-typable Haemophilus influenzae fimbrin peptide fused via a linker peptide to a T-cell epitope peptide. The chimeric peptide is used in immunogenic compositions which induce an immune response against non-typable Haemophilus influenzae. This sequence represents an example of a H. influenzae fimbrin peptide used to generate the chimeric peptide
                                                                                                                                                                                                                                                                              Synthetic chimeric fimbrin peptide – useful for vaccination against non-
typable Haemophilus influenzae.
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Pred. No. 4.6e-09;
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.l Similarity 94.4%;
17; Conservative
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Best Local Similarity
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                                                                                            02-JUN-1995;
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Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
Haemophilus influenza.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Haemophilus influenzae; P5-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
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Pred. No. 1.6e-08;
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                    conjunctivitis; lower respiratory tract infection.
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RSDYEFYEAPNSTRDHKKG 19
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                                                                                                                                                                          28-MAY-1999;
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                                                                                                                                                                                                                                                                                                               Bakaletz LO,
                                                                                             W09964067-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against Haemophilus influenza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY79955 to AAY7993, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                              Vaccine, non-typeable Haemophilus influenzae, ntHi; infection; chimeric protein; Hamophilus influenzae; PS-like fimbrin protein; lipoprotein D; LB1(E); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention describes antigenic P5-like fimbrin subunit peptides (LBI(f) peptides) of P5-like fimbrin proteins from various Haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as
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                                                                                                                                                                                          Non-typeable H. influenzae group 1 LB1(f) peptide N226NP.
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                                                                      AAY79968 standard; peptide; 19 AA
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                                                                                                                                                                                                                                                                                                                               Haemophilus influenzae
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Best Local Similarity
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Novel antigenic P5-like fimbrin subunit peptides used in vaccines against Haemophilus influenza.
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    otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY79955 to AAX79993, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of the present invention
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and treatment of Haemophilus influenzae infections,
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Pred. No. 2.5e-08;
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Pred. No. 3.7e-08;
0; Mismatches 2; Indels
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88.9%;
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88.9%;
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Matches 16, Conservative
                                                                                                                                                                                                                                                          16; Conservative
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Best Local Similarity
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                                                                                                                             Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
Haemophilus influenza.
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                                                                                                                                                                                                                         The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various Haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY79955 to AAY7993, and AAS91201 to AAZ91261, represent sequences used in the exemplification of the present invention
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                                           Lobet Y;
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                                              Dequesne G,
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  (OHIS ) UNIV OHIO STATE RES FOUND
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                                              Cohen J,
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                                                                                     WPI; 2000-116457/10
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                                              Bakaletz LO,
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AAY79966

RESULT 27

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Query Match

Matches

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Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
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                Vaccine, non-typeable Haemophilus influenzae, ntHi; infection; chimeric protein; Haemophilus influenzae; P5-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
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Pred. No. 8.3e-08;
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                                                                                                                                                                                                                                       99WO-US011980.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81.9%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 83.3
Matches 15; Conservative
                                                                                                                    Haemophilus influenzae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Haemophilus influenza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Haemophilus influenzae
                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-116457/10.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 19 AA;
                                                                                                                                                                                                                                                                                                                                                                            Bakaletz LO,
                                                                                                                                                           WO9964067-A2
                                                                                                                                                                                                                                     28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9964067-A2
                                                                                                                                                                                                16-DEC-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various Haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                          Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Haemophilus influenzae; PS-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; octitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                     Non-typeable H. influenzae group 1 LB1(f) peptide NTHI-484.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 88; ....
Pred. No. 3.7e-08;
Pred. no. 3.7e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Non-typeable H. influenzae group 1 LB1(f) peptide N214NP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83.8%; Score 88; DB 3; Length 19; 84.2%; Pred. No. 3.7e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lobet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
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                      ||||||||
RSDYKFYNDANGTRDHKK 18
                                                                                                                                    AAY79965 standard; peptide; 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY79971 standard; peptide; 19
RSDYKFYEAANGTRDHKK 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US011980
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                                                                                                                                                                                                                (first entry)
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hes 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bakaletz LO, Cohen J,
                                                                                                                                                                                                                                                                                                                                                                                            Haemophilus influenzae
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                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9964067-A2
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Matches
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XXXEX8

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Haemophilus influenza.
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Local S. ...
16;
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                                                                                                                                                                                                                                                                                                       AAY79969;
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                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                 RESULT 33
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                                                                                                                                 Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
                                                                                                                                                                              The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various Hademophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. ANT79955 to ANT9993, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Haemophilus influenzae; PS-like fimbrin protein; lipoprotein D; LBI(f); immunogenic; antiqenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Non-typeable H. influenzae group 1 LB1(f) peptide NTHI-567.
                                                                                                                                                                                                                                                                                                                81.0%; Score 85; DB 3; Length 19;
84.2%; Pred. No. 1.2e-07;
ive 0; Mismatches 3; Indels
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                                                                                          Lobet Y;
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                                                           (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS. (OHIS ) UNIV OHIO STATE RES FOUND.
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                                                                                          Dequesne G,
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                                                                                                                                                               Disclosure; Page 46; 68pp; English
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(OHIS ) UNIV OHIO STATE RES FOUND.
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                                                                                                                                                                                                                                                                                                                                                                                                                             AAY79964 standard; peptide; 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98GB-00012613.
                      99WO-US011980
                                        98GB-00012613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                         Local Similarity 84.2
                                                                                          Bakaletz LO, Cohen J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cohen J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Haemophilus influenzae
                                                                                                                                          Haemophilus influenza.
                                                                                                                                                                                                                                                                          the present invention
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                                                                                                            WPI; 2000-116457/10.
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                     28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bakaletz LO,
                                        11-JUN-1998;
                                                                                                                                                                                                                                                                                              Sequence 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-MAY-2000
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   16-DEC-1999
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Matches
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Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
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                                                            The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various Haemophilus infiluenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY19955 to AAY19931, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Haemophilus influenzae; P5-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 85; DB 3; 1
Pred. No. 1.2e-07;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
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Example 1; Page 29; 68pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 RSDYKFYEDANGTRDRKTG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 RSDYKFYEAANGTRDHKKG 19
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84.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Haemophilus influenzae.
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                                                                                                                                                                                                                                                                                                                                                                                                           the present invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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RESULT 34 AAR85450

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Novel synthetic chimeric fimbrin peptide LB1 or LB2 comprising a first peptide unit, T cell epitope as second peptide unit and third linker peptide unit, useful for preventing or reducing severity of otitis media.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a synthetic chimaeric fimbrin peptide LBI or comprises a first peptide unit derived from H. influenzae fimbrin, a second peptide unit containing a T cell epitope and a third linker peptide which connects the first peptide to the second. The chimaeric peptide is useful for inducing an immune response in animals against ntypable Haemophilus influenzae (NTHi) and for preventing or reducing adherence of NTHi to host cells thereby preventing or reducing the severity of otitis media. The present sequence is an H. influenzae fimbrin peptide for use in the chimaeric peptides of the invention.
                                                                                                                                                  Fimbrin; T cell epitope; vaccine; otitis media; auditory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Non-typeable H. influenzae group 1 LB1(f) peptide N250NP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 83; DB 7; Length 18;
Pred. No. 2.6e-07;
1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; SEQ ID NO 1; 15pp; English.
ADC89652 standard; peptide; 18'AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY79972 standard; peptide; 19 AA
                                                                                                            H. influenzae fimbrin peptide #1.
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                                                                                                                                                                                                                                                                                                                                                                98US-00148711
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83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kaumaya PTP;
                                                                        (first entry)
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Best Local Similarity 83.3
Matches 15; Conservative
                                                                                                                                                                                                        Haemophilus influenzae.
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                                                                                                                                                                                                                                                                                                                                                                                                    (BAKA/) BAKALETZ L O.
(KAUM/) KAUMAYA P T P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2003-810881/76.
                                                                                                                                                                      antiinflammatory
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 18 AA;
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                                                                          01-JAN-2004
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                                    ADC89652;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "amino acid at position 311 is not identified in the specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nontypable H. influenzae HI outer membrane protein P5 was isolated by extraction of the outer membrane with detergents and cation-exchange chromatography. P5 (or its peptide fragments) are used in vaccines for prevention of H. influenzae infections implicated in otitis media, sinusitis and chronic pulmonary obstructive disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Purified H.influenzae PS outer membrane protein - used for preventing reducing susceptibility to or treating H.influenzae infections.
                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                      P5 outer membrane protein; vaccine; otitis media; sinusitis; chronic pulmonary obstructive disease.
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84.2%; Pred. No. 5.5e-06;
ive 0; Mismatches 3; Indels
                                                    Score 84; DB 3; Length 19;
Pred. No. 1.9e-07;
2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                  Nontypable H. influenzae P5 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 7-8; 16pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                    AAR85450 standard; protein; 338 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           119 RSDYKFYEAPNSTRDAKKG 137
                                                                                                                                1 RSDYKFYEAANGTRDHKKG 19
                                                                                                                                                    1 RSDYKFYEDANGTRERKRG 19
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                                                  Query Match
Best Local Similarity 78.9%;
Matches 15; Conservative
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Best Local Similarity 84.2
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Haemophilus influenzae.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 338 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Misc-difference
                Sequence 19 AA;
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RESULT 35 ADC89652

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9905-0140351P

9905-0141230P

9905-014312P

9905-0143131P

9905-014331P

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       21-APR-1999;
23-APR-1999;
28-APR-1999;
30-APR-1999;
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04-MAY-1999;
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                                                                                                                             Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
Haemophilus influenza.
                                                                                                                                                                           The present invention describes antigenic P5-like fimbrin subunit peptides (LB1(f) peptides) of P5-like fimbrin proteins from various Hamophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such as otitis media, sinusitis, conjunctivitis, or lower respiratory tract infection. The peptides may also be used in vaccines against H. influenzae. Antibodies and probes from the present invention can be used for diagnosis of H. influenzae infection. ANT19955 to ANT19933, and AAZ91201 to AAZ91252, represent sequences used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein identification, signal transduction pathway, metabolic pathway, hybridisation assay, genetic mapping, gene expression control; promoter; termination sequence.
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                                                                                            Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
                                                              (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS. (OHIS ) UNIV OHIO STATE RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                           AAG45896 standard; protein; 311 AA
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990S-0123180P.
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                            99WO-US011980
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Best Local Similarity 78.9
Matches 15, Conservative
                                                                                                                                                                                                                                                                 the present invention
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                                                                                                             WPI; 2000-116457/10.
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16-APR-1999;
                            28-MAY-1999;
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Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter;
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red. No. 11;
Mismatches 7
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Pred. No.
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 99US-0159330P.
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50.0%;
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Best Local Similarity
Matches 9; Conserv
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PR 23-JUL-1999; 99US-014519P.
PR 23-JUL-1999; 99US-014919P.

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                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                            Score 48;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                            AAG20945 standard; protein; 361 AA
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50.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                              17-OCT-2000 (first entry)
                                                                                                                                                                                                                                           Query Match
Best Local Similarity 50.03
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  termination sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidopsis thaliana
21-OCT-1999;
21-OCT-1999;
21-OCT-1999;
22-OCT-1999;
22-OCT-1999;
25-OCT-1999;
25-OCT-1999;
26-OCT-1999;
26-OCT-1999;
26-OCT-1999;
28-OCT-1999;
28-OCT-1999;
28-OCT-1999;
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29-MAR-1999;
06-APR-1999;
06-APR-1999;
16-APR-1999;
19-APR-1999;
23-APR-1999;
23-APR-1999;
30-APR-1999;
30-APR-1999;
30-APR-1999;
40-APR-1999;
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11-MAY-1999;
14-MAY-1999;
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09-MAR-1999;
23-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-SEP-2000
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06-MAY-1999
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RR 27-JUL-1999; 9918-0145376 PR 27-JUL-1999; 9918-0145313 PR 27-JUL-1999; 9918-014638 PR 02-AUC-1999; 9918-014638 PR 02-AUC-1999; 9918-014638 PR 02-AUC-1999; 9918-014638 PR 02-AUC-1999; 9918-0147130 PR 11-AUC-1999; 9918-0147130 PR 12-AUC-1999; 9918-01491730 PR 12-AUC-1999; 9918-0151030 PR 13-AUC-1999; 9918-0151030 PR 13-AUC-
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                                                                                                              Gaps
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                                                                                           / Match 45.7%; Score 48; DB 3; Length 361; Local Similarity 50,0%; Pred. No. 13; 13; 15 Conservative 2; Mismatches 7; Indels
                                                                                                                                                                                                                                          Arabidopsis thaliana protein fragment SEQ ID NO: 57658.
                                                                                                                                                                                        AAG45883 standard; protein; 361 AA
                                                                                                                                         SDEKLYKGIHGYTDHKAG 186
                                                                                                                              2 SDYKFYEAANGTRDHKKG 19
        990S-0161405P.
990S-016135P.
990S-016135P.
990S-0161361P.
990S-0161920P.
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990S-0161992P.
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9905-0123180P.
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9905-012624P.
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 99US-0161404P
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25-OCT-1999;
25-OCT-1999;
26-OCT-1999;
26-OCT-1999;
26-OCT-1999;
28-OCT-1999;
28-OCT-1999;
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05-MAR-1999,
23-MAR-1999,
25-MAR-1999,
25-MAR-1999,
01-APR-1999,
06-APR-1999,
06-APR-1999,
16-APR-1999,
19-APR-1999,
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23-APR-1999,
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06-MAY-1999,
06-MAY-1999,
06-MAY-1999,
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14-MAY-1999;
14-MAY-1999;
14-MAY-1999;
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20-MAY-1999;
21-MAY-1999;
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                                                                                             Query Match
Best Local S
Matches 9
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02-AUG-1999; 04-AUG-1999; 04-AUG-1999; 04-AUG-1999; 05-AUG-1999; 06-AUG-1999; 06-AUG-1999; 09-AUG-1999; 11-AUG-1999;	12-Aug-1999; 13-Aug-1999; 13-Aug-1999; 16-Aug-1999; 17-Aug-1999; 20-Aug-1999; 20-Aug-1999; 20-Aug-1999; 23-Aug-1999; 23-Aug-1999; 23-Aug-1999; 24-Aug-1999; 27-Aug-1999;	10. SEP-1999 13. SEP-1999 15. SEP-1999 16. SEP-1999 20. SEP-1999 23. SEP-1999 24. SEP-1999 24. SEP-1999 26. OCT-1999 06. OCT-1999 07. OCT-1999 12. OCT-1999 13. OCT-1999 13. OCT-1999	13-0CT-1999; 14-0CT-1999; 14-0CT-1999; 14-0CT-1999; 14-0CT-1999; 16-0CT-1999; 21-0CT-1999; 21-0CT-1999; 21-0CT-1999; 21-0CT-1999; 22-0CT-1999; 22-0CT-1999; 22-0CT-1999; 25-0CT-1999; 26-0CT-1999; 26-0CT-1999; 26-0CT-1999; 26-0CT-1999; 26-0CT-1999; 26-0CT-1999; 26-0CT-1999; 26-0CT-1999; 26-0CT-1999; 26-0CT-1999; 26-0CT-1999;
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99US-0135629P. 99US-0136021P. 99US-0136732P. 99US-0137522P. 99US-0137528P. 99US-013754P. 99US-0138540P. 99US-0138540P. 99US-0138147P.	9908-011394528-9908-011394528-9908-011394538-9908-01139458-9908-01139458-9908-01139458-9908-011394612-9908-011394612-9908-011397612-9908-011397638-9908-011397638-9908-011397638-9908-011013538-9908-014013548-9908-014013648-9908-014013648-9908-014013648-9908-9908-014013648-9908-014013648-9908-014013648-9908-014013648-9908-014013648-9908-9908-9908-9908-9908-9908-9908-99	990S-0140823P. 990S-0140891P. 990S-0141842P. 990S-0141842P. 990S-0142154P. 990S-0142154P. 990S-0142189P. 990S-0142803P. 990S-0143542P. 990S-0143542P. 990S-0143624P. 990S-0143624P. 990S-0143624P. 990S-0144086P.	99US-0144332P. 99US-0144333P. 99US-0144333P. 99US-0144332P. 99US-0144332P. 99US-0144332P. 99US-0144884P. 99US-014684P. 99US-014508P. 99US-014508P. 99US-014508P. 99US-014518P. 99US-014518P. 99US-014518P. 99US-014518P. 99US-014518P. 99US-014518P. 99US-014518P. 99US-014518P. 99US-014518P.
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